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[Lab. of Pharm. Engineering]

Improvement of the stability of water-in-oil-in-water multiple emulsions by the addition of surfactants in the internal aqueous phase of the emulsions.

TAKAYUKI OHWAKI, RYUICHI MACHIDA, HIROSHI OZAWA, YOSHIAKI KAWASHIMA*,
TOMOAKI HINO, HIROFUMI TAKEUCHI, TOSHIYUKI NIWA

In order to improve the stability of w/o/w emulsions, an attempt was made to elucidate the influence of addition of hydrophilic surfactants into the internal aqueous compartment of the emulsion, on the breakdown of the suspending vesicular globules of w/o/w emulsion, the changes in diameter of the internal aqueous compartments and of the suspending vesicular globules of w/o/w emulsion, as compared with emulsions without additives and with addition of sodium chloride.

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[Lab. of Pharm. Engineering]

Molecular Interaction of Baicalein and Phosphatidylcholine in Liposomal Membrane.

TOMOAKI HINO, ZHIJUN YANG, HIROFUMI TAKEUCHI, TOSHIYUKI NIWA,
TOSHIYUKI TANAKA, YOSHIAKI KAWASHIMA*, HIROYUKI KOJIMA

Baicalein is the flavonoid contained in the root of *Scutellaria baicalensis* Georgi. X-ray diffraction patterns of the dried baicalein-intermixed phosphatidylcholine films and ¹H NMR spectra in de-acetone solutions were investigated to clarify the interaction of the flavonoid and phosphatidylcholine molecules in the liposomal membranes. It was found that baicalein molecules were entrapped in liposomal membranes by hydrogen-bonding of polar head groups of phosphatidylcholine molecules with C₆- and C₇- hydroxyl groups of baicalein.

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[Lab. of Pharm. Engineering]

Preparation of a Sustained-Release Matrix Tablet of Acetaminophen with Pulverized Low-Substituted Hydroxypropylcellulose via Dry Granulation.

YOSHIAKI KAWASHIMA*, HIROFUMI TAKEUCHI, TOMOAKI HINO,
TOSHIYUKI NIWA, TZU-LANG LIN, FUJIO SEKIGAWA

Pulverized L-HPC (low-substituted hydroxypropylcellulose, LH41) can be used as a sustained-release matrix filler. In previous papers, we had reported that the flowability and packability of LH41 powder with or without acetaminophen was improved by wet granulation for practical uses. In the present report, dry granulation via slugging was employed to avoid the use of an organic solvent (e.g. ethanol).